

amount between about 0.3 and about 0.5 weight percent which is effective to provide an inter-layer bond strength with said surface layer which is at least about 30 percent greater than the inter-layer bond strength between said surface layer and a film formed of isotactic polypropylene homopolymer.

Remarks

The application has been carefully reconsidered in light of the Office Action of August 27, 2001. By this Amendment, claim 3 has been cancelled and placed in independent form as claim 31, and the dependency of claim 7 has accordingly been changed from claim 3 to claim 31. In addition, claim 5 has been cancelled and placed in independent form as new claim 32. It will be recognized that these amendments raise no issues requiring further search and consideration, and accordingly, entry under the provisions of 37 CFR 1.116 is respectfully requested.

The Examiner's action in withdrawing the previous rejections based upon U.S. Patent Nos. 5,573,723 and 5,716,570 is acknowledged with appreciation. Hopefully, this action will simplify the issues remaining in the prosecution of this application.

The rejection of applicants' claims in the Final Rejection as anticipated by or obvious in view of U.S. Patent No. 6,063,482 to Peiffer is respectfully traversed. With respect to the Final Rejection it is noted that, although only the '482 patent is apparently applied in the prior art rejections, a reference on page 5 of the Office Action is made to U.S. Patent No. 5,795,946 to Agarwal. As discussed below, applicants respectfully submit that the Examiner's position based upon inherency is not well founded. However, if this position is maintained and the Agarwal reference is used in support of this position, it is respectfully submitted that the Final Rejection should be withdrawn under the procedure outlined in MPEP Section 706.07(a).

In regard to the rejection based upon Peiffer et al, it will be recognized that applicants' invention as set forth in independent claim 1 requires a multilayer film having at least a surface layer and a core layer contiguous to the surface layer. The surface layer is formed of a thermoplastic polymer effective to form a heat seal as specified in the claim. The core layer is formed of an isotactic ethylene/propylene copolymer. The ethylene content of the core layer, as called for in independent claim 1 is no more than one weight percent and is effective to provide an interlayer bond strength of at least 15% greater than the corresponding interlayer bond strength between the surface layer polymer and a core layer formed of isotactic polypropylene homopolymer. Independent claim 31 (formerly claim 1) is similar to claim 1 but calls for ethylene in an amount effective to provide an enhancement in interlayer bond strength of at least 50%, and independent claim 32 similarly calls for an ethylene content in an amount within the range of 0.3-0.5 wt.% effective to provide an enhancement in interlayer bond strength of at least 30%.

The patent to Peiffer is directed to a polypropylene film that may be single ply or multiply which is configured to have improved tear propagation resistance. To the extent that Peiffer involves a multilayer film, it does not call for a surface layer capable of forming an effective heat seal as required in each of applicants' claims. In fact, Peiffer makes absolutely no reference to heat seal ability of the surface layer of a multilayer film.

The patent to Peiffer is also devoid of any reference to interlayer bond strength. Further, the patent to Peiffer contains no disclosure of a multilayer film incorporating a core layer that is treated in any respect to enhance the interlayer bond strength. Clearly, Peiffer does not disclose the use of an ethylene/propylene copolymer as a core layer in which the ethylene content is 1 wt.% or less as specified in claim 1 or within the other low levels of ethylene content

as specified in claims 4, 6, 7, 28, and 32. In fact, in Peiffer, where ethylene is present in a multilayer film, it is present in a top layer and not in the base layer. Where only a single-ply film is involved, ethylene may be present, but as pointed out in applicants' previous respect, in much broader and greater concentrations than employed in the core layer of applicants' invention.

It further will be noted that the nature of the products, in which the improved tear propagation resistance achieved in Peiffer is employed would, include products such as tapes and insulating materials. Clearly, there would be no reason for such products to have a heat seal ability characteristic as specified in applicants' claim.

In regard to the Examiner's comments respecting the various examples in Peiffer, while these are only examples, they nevertheless are consistent with the overall disclosure in Peiffer which indicates that where multilayer films are involved and, if an ethylene comonomer is employed, the comonomer is employed in the top layers and not the core layer.

To the extent that the Examiner relies upon an inherency argument with respect to either the heat-sealing characteristics of the surface layer or the interlayer bond strength, applicants would again respectfully invite the Examiner's attention to the MPEP, which accurately sets forth the case law requirements for inherency. It is again noted that inherency cannot be established by a mere allegation that a particular characteristic may possibly be present. Thus, the statement found in MPEP Section 2112:

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. (Emphasis original.)

is fully applicable here. This is particularly so in the present case since there is no disclosure in Peiffer of a multilayer film employing a core layer involving an isotactic propylene copolymer containing no more than 1 wt.% ethylene.

In regard to the position taken in the Final Rejection that the use of a small amount of ethylene to enhance the interlayer bond strength can be arrived at through routine experimentation to optimize the ethylene content, the Examiner's attention is again respectfully invited to MPEP Section 2144.05(b), which provides:

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of optimum or workable ranges of said variable might be characterized as routine experimentation.

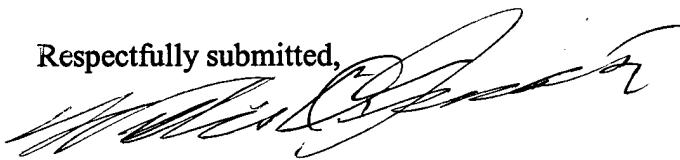
As noted previously, if the Examiner is to rely upon the Agarwal patent, the Final Rejection should be withdrawn. However, this issue aside, there is absolutely nothing in the prior art, including Agarwal, that discloses that the ethylene content in a core layer of a multilayer film, as called for in applicants' invention, can be adjusted to impact the interlayer bond strength. This is found only in applicants' disclosure and not in the prior art.

For the reasons advanced above, it is respectfully submitted that applicants' claim are patentable over the remaining prior art reference, U.S. Patent No. 6,063,482. Accordingly, an early reconsideration and allowance of this application is respectfully requested. In any case, it is respectfully submitted that this Amendment be entered since it raises no new issues requiring further search and consideration.

Should the Examiner feel that further discussions with applicants' attorney would be helpful in facilitating this case to an early conclusion, she is invited to call the undersigned at the number indicated below.

A check in the amount of \$110.00 is enclosed to cover the fee for a one-month extension for response to the Office Action of August 27, 2001. The response was due November 27, 2001, but with the one-month extension, the response is due by December 27, 2001. The Commissioner is hereby authorized to charge any further fee, which may be due in connection with this Amendment, or to credit any overpayment to Deposit Account No. 12-1781.

Respectfully submitted,



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Date: December 19, 2001

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Attachment to Response (Amendment) to August 27, 2001, Office Action:

In the Claims

Please amend the claims as follows:

Cancel claim 3 and rewrite in independent form as new claim 31.

Cancel claim 5 and rewrite in independent form as new claim 32.

7. (Amended) The combination of claim [3] 31, wherein said core layer formed of ethylene-propylene copolymer contains ethylene in an amount between about 0.5 weight percent and about 0.7 weight percent.

Add the following new claims:

31. In a multi-layer polyolefin film, the combination comprising:
 - a. a surface layer of said film comprising a thermoplastic polymer capable of forming an effective heat seal with a corresponding thermoplastic polymer upon heating to an elevated temperature and compression; and
 - b. a core layer contiguous to said surface layer, said core layer having a thickness greater than said surface layer, said core layer formed of ethylene-propylene copolymer having an isotactic structure and containing ethylene in an amount of no more than about one weight percent which is effective to provide an inter-layer bond strength with said surface layer which is at least about 50 percent greater than the inter-layer bond strength between said surface layer and a film formed of isotactic polypropylene homopolymer.

32. In a multi-layer polyolefin film, the combination comprising:

- a. a surface layer of said film comprising a thermoplastic polymer capable of forming an effective heat seal with a corresponding thermoplastic polymer upon heating to an elevated temperature and compression; and
- b. a core layer contiguous to said surface layer, said core layer having a thickness greater than said surface layer, said core layer formed of ethylene-propylene copolymer having an isotactic structure and containing ethylene in an amount between about 0.3 and about 0.5 weight percent which is effective to provide an inter-layer bond strength with said surface layer which is at least about 30 percent greater than the inter-layer bond strength between said surface layer and a film formed of isotactic polypropylene homopolymer.